#### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

# (19) World Intellectual Property **Organization**

International Bureau





### (43) International Publication Date 10 February 2005 (10.02.2005)

**PCT** 

### (10) International Publication Number WO 2005/012037 A3

(51) International Patent Classification<sup>7</sup>: H03K 17/955, B60R 19/48

G01V 3/08,

(21) International Application Number:

PCT/GB2004/003260

(22) International Filing Date: 28 July 2004 (28.07.2004)

(25) Filing Language:

÷

English

(26) Publication Language:

English

(30) Priority Data: 0317644.3

28 July 2003 (28.07.2003) GB

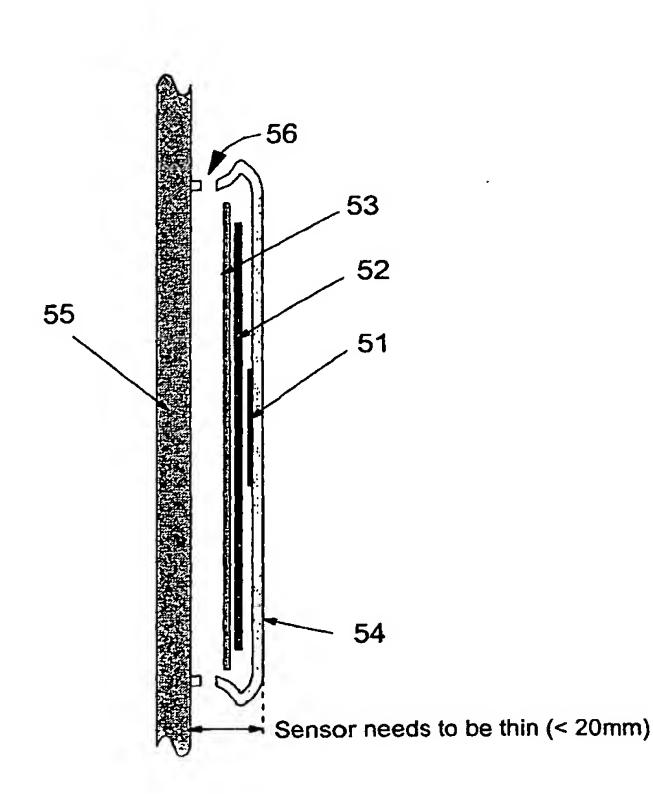
- (71) Applicant (for all designated States except US): AB AU-TOMOTIVE ELECTRONICS LTD. [GB/GB]; Forest Farm Industrial Estate, Whitchurch, Cardiff CF14 7YS (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): MOON, Anthony

[GB/GB]; 1 Radyr Court Rise, Llandaff, Cardiff CF5 2QH (GB). SNELL, David [GB/GB]; 3 Barquentine Place, Atlantic Wharf, Cardiff CF10 4NH (GB).

- (74) Agent: MIDGLEY, Jonathan, Lee; Marks & Clerk, 90 Long Acre, London WC2E 9RA (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: CAPACITIVE SENSOR



(57) Abstract: A capacitive sensor for mounting to a body, particularly a body such as a van door (55). The sensor has a sensor plate (51) to which a first signal is applied. A first guard plate (52) is interposed between the sensor plate (51) and the body (55), and a second guard plate (53) is interposed between the first guard plate (52) and the body (55). The first and second guard plates (52, 53) each have signals applied thereto which are the same or at least similar to the first signal applied to the sensor plate (51). In this way, the second guard plate (53) acts as a rear guard to the first guard (52) and reduces its capacitance to ground. This reduces the current drawn by the first guard (52), allowing it to more accurately track the signal on the sensor and consequently better mask the sensor plate (51) from the body (55).

## WO 2005/012037 A3



ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report: 24 March 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.